

CLAIMS

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- 1/ A nib constituted by a segment of a coherent, elongate element of high porosity material, with at least a first end shaped to form a writing tip, wherein the pores and/or capillaries of said material are blocked over a limited thickness e at the longitudinal outer periphery of the elongate element, with the exception of the first end forming a writing tip.
 - 2/ A nib according to claim 1, wherein for an elongate element of circular cross-section, having a diameter lying in the range 2 mm to 15 mm, the thickness e lies in the range 0.01 mm to 1 mm.
 - 3/ A nib according to claim 1, including a sealing agent which blocks the pores and/or the capillaries of said material over said thickness e.
 - 4/ A nib according to claim 3, wherein the elongate element is a rod that is constituted by acrylic fibers that are held together by an MF resin, and wherein the sealing agent is also an MF resin.
 - 5/ A nib according to claim 3, wherein the elongate element is a rod that is constituted by polyester fibers, and wherein the sealing agent is an acid-catalyzed melamine resin, a melamine urea-formaldehyde resin, a two-component epoxy resin, or a two-component polyurethane resin.
 - 6/ A nib according to claim 1, wherein the elongate element is constituted by sintered microbeads, and wherein the pores are blocked by localized hot-melting of said microbeads over said thickness e.
 - 7/ A method of treating a coherent high porosity, elongate element designed to form a nib according to

B1 claim 3, the method consisting firstly in continuously impregnating said elongate element with a sealing bath having a sealing agent that is inert relative to the components of the ink, impregnation being performed under conditions of viscosity, of time, of surface tensions, and of concentration in particular, such that said bath diffuses into the elongate element over a limited thickness e at its longitudinal periphery, and said method consists secondly in setting the sealing agent.

8/ A method according to claim 7, wherein the elongate element is a rod that is constituted by fibers that are secured by a binder, and said binder is used as the sealing agent.

9/ A method according to claim 8, wherein the rod is based on acrylic fibers, and the binding and sealing agent is an acid-catalyzed MF resin.

10/ A method according to claim 7, wherein the sealing agent is set by subjecting the elongate element to heat treatment.

11/ A nib obtained by cutting into segments and machining a high porosity elongate element treated according to the method of claim 7.

12/ A method of treating a segment of coherent high porosity, elongate element designed to form a nib according to claim 6, wherein said segment is obtained by molding and sintering microbeads, and said method consists in applying a longitudinal, peripheral, thermal shock over the segment, with the exception of the first end which forms the writing tip, so as to obtain localized hot-melting of the microbeads over a thickness e.

B1/ 13/ A method according to claim 12, wherein the thermal shock is performed at a temperature lying in the range 200°C to 300°C for a period of 1 second (s) to 10 s.